

Application No.: 10/728,490

Case No.: 58623US002

**Remarks**

Claims 1-38 were originally filed and have been pending. Independent Claims 1 and 38 are being amended herein to expressly state that the interstitial void space is periodic (basis therefor being found, for example, at page 41, lines 9-18; and in Figures 1a-1d and the accompanying discussion at page 53, line 19, through page 54, line 11, of Applicants' specification).

**Rejection Under 35 U.S.C. Section 103**

Claims 1-38 were rejected under Section 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/ 0068023 (Leatherdale et al., hereinafter referred to as Leatherdale) in view of U.S. Patent Application Publication No. 2004/ 0012872 (Fleming et al., hereinafter referred to as Fleming). This rejection is respectfully traversed for the following reasons.

Applicants respectfully submit that Leatherdale cannot be applied as a reference against the instant application under Section 103. Leatherdale cannot be applied as a 102(e), (f), and/or (g)/103 reference because Leatherdale and the instant application were, at the time that the invention of the instant application was made, owned by, or subject to an obligation of assignment to, 3M Innovative Properties Company. Leatherdale cannot be applied as a 102(a) or (b)/103 reference for at least the reason that the publication date of Leatherdale (April 8, 2004) was later in time than the effective filing date of the instant application (December 5, 2003). Thus, the applied combination of references is improper, and the rejection under Section 103 fails.

In order to advance prosecution, however, Applicants have amended their claims to further clarify their focus. Applicants describe and claim a process comprising

- (a) providing a substantially inorganic photoreactive composition;
- (b) exposing, using a multibeam interference technique involving at least three beams, at least a portion of said photoreactive composition to radiation of appropriate wavelength, spatial distribution, and intensity to produce a two-dimensional or three-dimensional periodic pattern of reacted and non-reacted portions of said photoreactive composition; and

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(c) removing said reacted portion or said non-reacted portion of said photoreactive composition to form periodic interstitial void space.

(Claim 1, with the current amendment underlined.) The process can be used to provide high refractive index contrast periodic dielectric structures.

Even if Leatherdale were a proper reference, the combination of Leatherdale and Fleming would fail to provide the instant process for at least the reason, *inter alia*, that the void space of the pyrolyzed structures described by Leatherdale in Paragraphs [0031] and [0032] does not appear to be periodic. Applicants therefore respectfully submit that their claimed process is patentable and respectfully request withdrawal of the rejection under Section 103.

### Concluding Remarks

Reconsideration and allowance of Applicants' claims are respectfully requested.

Respectfully submitted,

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